

# PCT

## REQUEST

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

For receiving Office use only

International Application No.

International Filing Date

Name of receiving Office and "PCT International Application"

Applicant's or agent's file reference  
(if desired) (12 characters maximum) 59441-PCT

### Box No. I TITLE OF INVENTION

METHODS OF PRODUCING DIFFERENTIATED HEMATOPOIETIC CELLS FOR TREATMENT OF CYTOPENIA

### Box No. II APPLICANT

This person is also inventor

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

Roger Williams Medical Center  
825 Chalkstone Avenue  
Providence, Rhode Island 02908

Telephone No.

Facsimile No.

Teleprinter No.

Applicant's registration No. with the Office

State (that is, country) of nationality:  
US

State (that is, country) of residence:  
US

This person is applicant  all designated States  all designated States except the United States of America only  the United States of America only  the States indicated in the Supplemental Box

### Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

QUESENBERRY, Peter J.  
400 Cole Avenue  
Providence, Rhode Island 02906

This person is:

applicant only

applicant and inventor

inventor only (If this check-box is marked, do not fill in below.)

Applicant's registration No. with the Office

State (that is, country) of nationality:  
US

State (that is, country) of residence:  
US

This person is applicant  all designated States  all designated States except the United States of America only  the United States of America only  the States indicated in the Supplemental Box

Further applicants and/or (further) inventors are indicated on a continuation sheet.

### Box No. IV AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE

The person identified below is hereby/has been appointed to act on behalf of  agent  common representative

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

ROSENFIELD, Jennifer K.  
EDWARDS & ANGELL, LLP  
P.O. Box 55874  
Boston, MA 02205

Telephone No.  
617.439.4444

Facsimile No.  
617.439.4170 / 7748

Teleprinter No.

Agent's registration No. with the Office  
53,531

Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

**Supplemental Box** *If the Supplemental Box is not used, this sheet should not be included in the request.*

1. *If, in any of the Boxes, except Boxes Nos VIII(i) to (v) for which a special continuation box is provided, the space is insufficient to furnish all the information: in such case, write "Continuation of Box No...." (indicate the number of the Box) and furnish the information in the same manner as required according to the captions of the Box in which the space was insufficient, in particular:*
  - (i) *if more than two persons are to be indicated as applicants and/or inventors and no "continuation sheet" is available: in such case, write "Continuation of Box No. III" and indicate for each additional person the same type of information as required in Box No. III. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below;*
  - (ii) *if, in Box No. II or in any of the sub-boxes of Box No. III, the indication "the States indicated in the Supplemental Box" is checked: in such case, write "Continuation of Box No. II" or "Continuation of Box No. III" or "Continuation of Boxes No. II and No. III" (as the case may be), indicate the name of the applicant(s) involved and, next to (each) such name, the State(s) (and/or, where applicable, ARIPO, Eurasian, European or OAPI patent) for the purposes of which the named person is applicant;*
  - (iii) *if, in Box No. II or in any of the sub-boxes of Box No. III, the inventor or the inventor/applicant is not inventor for the purposes of all designated States or for the purposes of the United States of America: in such case, write "Continuation of Box No. II" or "Continuation of Box No. III" or "Continuation of Boxes No. II and No. III" (as the case may be), indicate the name of the inventor(s) and, next to (each) such name, the State(s) (and/or, where applicable, ARIPO, Eurasian, European or OAPI patent) for the purposes of which the named person is inventor;*
  - (iv) *if, in addition to the agent(s) indicated in Box No. IV, there are further agents: in such case, write "Continuation of Box No. IV" and indicate for each further agent the same type of information as required in Box No. IV;*
  - (v) *if, in Box No. VI, there are more than three earlier applications whose priority is claimed: in such case, write "Continuation of Box No. VI" and indicate for each additional earlier application the same type of information as required in Box VI.*
2. *If the applicant intends to make an indication of the wish that the international application be treated, in certain designated States, as an application for a patent of addition, certificate of addition, inventor's certificate of addition or utility certificate of addition: in such a case, write the name or two-letter code of each designated State concerned and the indication "patent of addition," "certificate of addition," "inventor's certificate of addition" or "utility certificate of addition," the number of the parent application or parent patent or other patent grant and the date of grant of the parent patent or other patent grant or the date of filing of parent application (Rules 4.11(a)(iii) and 49bis.1(a) or (b)).*
3. *If the applicant intends to make an indication of the wish that the international application be treated, in the United States of America, as a continuation or continuation-in-part of an earlier application: in such a case, write "United States of America" or "US" and the indication "continuation" or "continuation-in-part" and the number and the filing date of the parent application (Rules 4.11(a)(iv) and 49.bis.1(d)).*

**Continuation of Box IV:**

CONLIN, David G.  
 NEUNER, George  
 BUCKLEY, Linda M.  
 CORLESS, Peter F.  
 MANUS, Peter J.  
 DALEY, Jr., William J.  
 BUCHANAN, Robert L.  
 O'DAY, Christine C.  
 HAZZARD, Lisa S.  
 TUCKER, David A.  
 HARTNELL III, George W.  
 ALEXANDER, John B.  
 JENSEN, Steven M.  
 PIFFAT, Kathryn A.  
 ROOS, Richard J.  
 MANSO, Peter J.  
 REES, Dianne M.  
 GITTEN, Howard M.  
 PENNY, Jr., John J.  
 KONIECZNY, J. Mark  
 ROSENFIELD, Jennifer K.  
 BUTLER, Gregory B.  
 KRAMER, Barry  
 WOFSY, Scott D.  
 CHACLAS, George N.  
 NEWMAN, Richard H.  
 SILVIA, David J.  
 HEUSCH, Marina I.  
 LAURO, Peter C.  
 KITCHELL, Barbara  
 HSI, Jeffrey D.  
 MAKARY, Meghan M.

The above attorneys are all members of the firm:

EDWARDS & ANGELL, LLP  
 P.O. Box 55874  
 Boston, Massachusetts 02205  
 US

**Box No.V DESIGNATIONS**

The filing of this request constitutes under Rule 4.9(a), the designation of all Contracting States bound by the PCT on the international filing date, for the grant of every kind of protection available and, where applicable, for the grant of both regional and national patents.

However,

- DE Germany is not designated for any kind of national protection
- KR Republic of Korea is not designated for any kind of national protection
- RU Russian Federation is not designated for any kind of national protection

(The check-boxes above may be used to exclude (irrevocably) the designations concerned in order to avoid the ceasing of the effect, under the national law, of an earlier national application from which priority is claimed. See the Notes to Box No. V as to the consequences of such national law provisions in these and certain other States.)

**Box No. VI PRIORITY CLAIM**

The priority of the following earlier application(s) is hereby claimed:

Filing date of earlier application (day/month/year)	Number of earlier application	Where earlier application is:		
		national application: country or Member	regional application:*	international application: receiving Office
item (1) 6 July 2003 (06.07.03)	60/485,509	US		
item (2) 7 July 2003 (07.07.03)	60/485,607	US		
item (3)				

Further priority claims are indicated in the Supplemental Box.

The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) (*only if the earlier application was filed with the Office which for the purposes of this international application is the receiving Office*) identified above as:

all items       item (1)       item (2)       item (3)       other, see Supplemental Box

\* Where the earlier application is an ARIPO application, indicate at least one country party to the Paris Convention for the Protection of Industrial Property or one Member of the World Trade Organization for which that earlier application was filed (Rule 4.10(b)(ii)): . . . . .

**Box No. VII    INTERNATIONAL SEARCHING AUTHORITY**

**Choice of International Searching Authority (ISA)** (if two or more International Searching Authorities are competent to carry out the international search, indicate the Authority chosen; the two-letter code may be used):

ISA/ US

**Request to use results of earlier search; reference to that search (if an earlier search has been carried out by or requested from the International Searching Authority):**

Date (day/month/year) Number Country (or regional Office)

**Box No. VIII DECLARATIONS**

The following declarations are contained in Boxes Nos. VIII (i) to (v) (mark the applicable check-boxes below and indicate in the right column the number of each type of declaration):

### Number of declarations

<input type="checkbox"/>	Box No. VIII (i)	Declaration as to the identity of the inventor
<input type="checkbox"/>	Box No. VIII (ii)	Declaration as to the applicant's entitlement, as at the international filing date, to apply for and be granted a patent
<input type="checkbox"/>	Box No. VIII (iii)	Declaration as to the applicant's entitlement, as at the international filing date, to claim the priority of the earlier application
<input type="checkbox"/>	Box No. VIII (iv)	Declaration of inventorship (only for the purposes of the designation of the United States of America)
<input type="checkbox"/>	Box No. VIII (v)	Declaration as to non-prejudicial disclosures or exceptions to lack of novelty

## Box No. IX CHECK LIST; LANGUAGE OF FILING

This international application contains:		This international application is accompanied by the following item(s) (mark the applicable check-boxes below and indicate in right column the number of each item):		Number of items
(a) in paper form, the following number of sheets:				
request (including declaration sheets)	: 4	<input checked="" type="checkbox"/> fee calculation sheet		: 1
description (excluding sequence listing and/or tables related thereto)	: 13	<input type="checkbox"/> original separate power of attorney		:
claims	: 4	<input type="checkbox"/> original general power of attorney		:
abstract	: 1	<input type="checkbox"/> copy of general power of attorney; reference number, if any: .....		:
drawings	: 6	<input type="checkbox"/> statement explaining lack of signature		:
<b>Sub-total number of sheets</b>	<b>28</b>	<input type="checkbox"/> priority document(s) identified in Box No. VI as item(s): .....		:
sequence listing	:	<input type="checkbox"/> translation of international application into (language): .....		:
tables related thereto	:	<input type="checkbox"/> separate indications concerning deposited microorganism or other biological material		:
(for both, actual number of sheets if filed in paper form, whether or not also filed in computer readable form; see (c))		<input type="checkbox"/> sequence listing in computer readable form (indicate type and number of carriers)		:
<b>Total number of sheets</b>	<b>: 28</b>	(i) <input type="checkbox"/> copy submitted for the purposes of international search under Rule 13ter only (and not as part of the international application)		:
(b) <input type="checkbox"/> only in computer readable form (Section 801(a)(i))		(ii) <input type="checkbox"/> (only where check-box (b)(i) or (c)(i) is marked in left column) additional copies including, where applicable, the copy for the purposes of international search under Rule 13ter		:
(i) <input type="checkbox"/> sequence listing		(iii) <input type="checkbox"/> together with relevant statement as to the identity of the copy or copies with the sequence listing mentioned in left column		:
(ii) <input type="checkbox"/> tables related thereto		 10. <input type="checkbox"/> tables in computer readable form related to sequence listing (indicate type and number of carriers)		:
(c) <input type="checkbox"/> also in computer readable form (Section 801(a)(ii))		(i) <input type="checkbox"/> copy submitted for the purposes of international search under Section 802(b-quarter) only (and not as part of the international application)		:
(i) <input type="checkbox"/> sequence listing		(ii) <input type="checkbox"/> (only where check-box (b)(ii) or (c)(ii) is marked in left column) additional copies including, where applicable, the copy for the purposes of international search under Section 802(b-quarter)		:
(ii) <input type="checkbox"/> tables related thereto		(iii) <input type="checkbox"/> together with relevant statement as to the identity of the copy or copies with the tables mentioned in left column		:
Type and number of carriers (diskette, CD-ROM, CD-R or other) on which are contained the		11. <input type="checkbox"/> other (specify): .....		:
<input type="checkbox"/> sequence listing: .....				
<input type="checkbox"/> tables related thereto: .....				
(additional copies to be indicated under items 9(ii) and/or 10(ii), in right column)				
Figure of the drawings which should accompany the abstract:	Language of filing of the international application:			

## Box No. X SIGNATURE OF APPLICANT, AGENT OR COMMON REPRESENTATIVE

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the request).


  
Jennifer K. Rosenfield, Reg. No. 53,531

July 6, 2004

Date

For receiving Office use only	
1. Date of actual receipt of the purported international application:	
3. Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application:	
4. Date of timely receipt of the required corrections under PCT Article 11(2):	
5. International Searching Authority (if two or more are competent): ISA/	
6. <input type="checkbox"/> Transmittal of search copy delayed until search fee is paid	
For International Bureau use only	
Date of receipt of the record copy by the International Bureau:	

2. Drawings:

 received: not received:

Date of receipt of the record copy by the International Bureau:	
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This sheet is not part of and does not count as a sheet of the international application.

**PCT**

**FEE CALCULATION SHEET**  
**Annex to the Request**

For receiving Office use only

International Application No.

Date stamp of the receiving Office

Applicant's or agent's  
file reference

59441-PCT

Applicant

Roger Williams Medical Center

**CALCULATION OF PRESCRIBED FEES**

1. TRANSMITTAL FEE .....

300.00 **T**

2. SEARCH FEE .....

1,000.00 **S**

International search to be carried out by **US**

*(If two or more International Searching Authorities are competent to carry out the international search, indicate the name of the Authority which is chosen to carry out the international search.)*

3. INTERNATIONAL FILING FEE

Where item (b) and/or (c) of Box No. IX apply, enter Sub-total number of sheets

} 28

Where item (b) and (c) of Box No. IX do not apply, enter Total number of sheets

**i1** first 30 sheets .....

1,134.00 **i1**

**i2** **0** x **12.00** = **0.00** **i2**  
number of sheets in  
excess of 30

**i3** additional component (only if sequence listing and/or tables related thereto are filed in computer readable form under Section 801(a)(i), or both in that form and on paper, under Section 801(a)(ii)):

400 x \_\_\_\_\_ = **i3**  
fee per sheet

Add amounts entered at **i1**, **i2** and **i3** and enter total at **I**

1,134.00 **I**

*(Applicants from certain States are entitled to a reduction of 75% of the international filing fee. Where the applicant is (or all applicants are) so entitled,*

4. FEE FOR PRIORITY DOCUMENT (if applicable) .....

40.00 **P**

5. TOTAL FEES PAYABLE .....

2,474.00

**TOTAL**

**MODE OF PAYMENT**

authorization to charge  
deposit account (see below)

postal money order

cash

coupons

cheque

bank draft

revenue stamps

other (specify):

**AUTHORIZATION TO CHARGE (OR CREDIT) DEPOSIT ACCOUNT**

*(This mode of payment may not be available at all receiving Offices)*

Receiving Office: **US**

Authorization to charge the total fees indicated above.

Deposit Account No.: **04-1105**

*(This check-box may be marked only if the conditions for deposit accounts of the receiving Office so permit) Authorization to charge any deficiency or credit any overpayment in the total fees indicated above.*

Date: **6 July 2004**

Authorization to charge the fee for priority document.

Name: **Jennifer K. Rosenfield, Reg. No. 53,531**

Signature: 